

Remarks/Arguments

Claims 8-11 are pending in the Application.

Claims 1-7 and 12-20 are cancelled.

Claims 8-11 stand rejected.

Claims 21-24 are added herein.

I. DOUBLE-PATENTING REJECTIONS

Claims 8-11 have been rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 4-12 of commonly-assigned U.S. Patent No. 6,885,022.

As the conflicting patent is commonly-assigned and in order to facilitate prosecution, Applicant files herewith a terminal disclaimer under 37 CFR 1.321 so as to obviate the above-described double-patenting rejection.

II. REJECTIONS UNDER 35 U.S.C. § 102

Examiner has rejected claims 8-9 under 35 U.S.C. § 102(e) as being anticipated by Chen et al., U.S. Patent No. 6,495,258 ("*Chen*").

Regarding claim 8, Examiner contends that "Chen et al. discloses an apparatus comprising a low pressure gaseous environment and a cathode comprising a substrate, and a metal salt-treated carbon nanotube layer deposited on the substrate (Col. 6)." *Office Action* at 4.

Applicants respectfully point out that the metal salts described in Col. 6 of *Chen* are deposited on a fiber substrate and decomposed to yield small metal particles suitable for growing carbon nanotubes. *Chen* states, "[a]t nanotube deposition conditions, the salt decomposes to afford small particles of the metal which then serve as a catalyst [for nanotube growth]." See *Chen*, Col. 6, ll. 52-55. The metal salts of *Chen* are therefore not present when the nanotubes are

deposited (i.e., grown). Additionally, *Chen* does not teach metal salt-treated carbon nanotubes, as described on pages 14-15 of the present Application. Accordingly, Claim 8 is not anticipated by *Chen*.

Regarding Examiner's rejection of claim 9, Applicant respectfully points out that since this claim depends directly from claim 8, it is not anticipated by *Chen* for the same reasons that claim is not anticipated by *Chen* (see above).

Additionally regarding claims 8-9, while not formally rejecting these claims in view of the the following art, Examiner contends that Zhou et al, U.S. Patent No. 6,280,697 ("*Zhou*") and SeGi Yu et al. Physica B 323 (2002) 177-179 ("*Yu*") disclose the limitations of claims 8-9. *Office Action* at 4.

Applicants respectfully point out that *Zhou* does not teach a field emission apparatus having a low pressure environment, but rather a battery electrode material. See *Zhou*, Abstract. Additionally, *Yu* fails to teach metal salt-treated carbon nanotubes, as described on pages 14-15 of the present Application and as required by claims 8-9. Accordingly, claims 8-9 are not anticipated by either *Zhou* or *Yu*.

As a result of the foregoing, Applicant respectfully requests that the Examiner withdraw the rejection of claims 8-9 under 35 U.S.C. § 102(e) as being anticipated by *Chen*.

III. REJECTIONS UNDER 35 U.S.C. § 103

Examiner has rejected Claim 10 under 35 U.S.C. § 103(a) as being unpatentable over *Chen* in view of Jin et al., United States Patent No. 6,283,812 ("*Jin*").

Regarding claim 10, Examiner contends that while "Chen et al. doesn't disclose the metal salt is cesium," that "Jin et al. discloses the metal salted carbon nanotube wherein the metal salt is cesium (Col. 13)." Examiner further contends that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to use cesium metal salt (alkali

metal salt) as disclosed in Jin et al., because alkali metal salt especially cesium to obtain high density per unit battery weight." *Office Action* at 5.

Examiner is reminded that:

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See* M.P.E.P. 706.02(j); *see also In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Notwithstanding previous comments regarding *Chen* (see above), Applicant respectfully points out that *Chen* and *Jin* are directed to differing arts: *Chen* to field emission devices and *Jin* to batteries. It would therefore not have been obvious to combine such references. Additionally, *Jin* is directed to carbon nanotubes with intercalated alkali metals, not salts, for use in batteries. *See Jin*, Col. 12, line 52- Col. 13, line 13. Accordingly, claim 10 is not rendered obvious by the combination of *Chen* and *Jin*.

Regarding claim 11, Examiner has rejected Claim 10 under 35 U.S.C. § 103(a) as being unpatentable over *Chen*. Examiner contends that while "Jin [Chen?] et al. doesn't disclose the thickness of the metal salt-treated carbon nanotube layer is in the range of about 1 to 10 micrometer," that such a parameter "would have been obvious and involve routine optimization which has been held to be within the level of ordinary skill in the art." *Office Action* at 6.

Applicant respectfully points out that since *Chen* fails to teach a metal salt-treated carbon nanotube layer (see above), the thickness of such a layer is irrelevant. Accordingly, claim 11 is not obvious in view of *Chen*.

As a result of the foregoing, Applicant respectfully requests that the Examiner withdraw the rejection of claim 10 under 35 U.S.C. § 103(a) as being unpatentable over *Chen* in view of *Jin*, and the rejection of claim 11 under 35 U.S.C. § 103(a) as being unpatentable over *Chen*.

IV. ADDED CLAIMS

Claims 21-24 have been added herein. No new matter is introduced by the addition of these two claims.

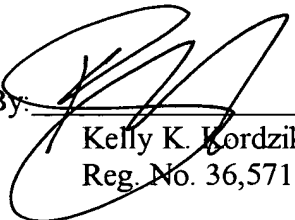
V. CONCLUSION

As a result of the foregoing, it is asserted by Applicant that the Claims in the Application are now in a condition for allowance, and respectfully request an allowance of such Claims.

Applicants respectfully request that the Examiner call Applicants' attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining problems.

Respectfully submitted,

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